

REMARKS

These Remarks are presented in response to the Office Action. New claims 21-27 are added. Claims 1-27 are now pending in this application.

Reconsideration of this application is respectfully requested in view of the following remarks. For the convenience and reference of the Examiner, the remarks of the Applicant are presented in the order in which the corresponding issues were raised in the Office Action.

I. General Considerations

In connection with the matters contemplated herein, Applicant respectfully notes at the outset that the following discussion should not be construed to constitute an exhaustive enumeration of the distinctions between the claims of the present application and the references cited by the Examiner. Instead, such distinctions are presented solely by way of example. Consistent with the foregoing, the discussion herein is not intended, and should not be construed, to prejudice or foreclose future consideration, by the Applicant, of additional or alternative distinctions between the claims of the present application and the references cited by the Examiner.

Moreover, Applicant notes that the claim amendments and/or remarks herein have been made merely to clarify the claimed embodiments from elements purported by the Examiner to be taught by the cited references. Such claim amendments and remarks, or a lack of remarks, should not be construed as an acquiescence, on the part of the Applicant, as to the purported teachings or prior art status of the cited references, nor as to the characterization of the cited references advanced by the Examiner. Accordingly, Applicant reserves the right to challenge the purported teaching and prior art status of the cited references at any appropriate time.

II. Claim Rejections Under 35 U.S.C. § 103(a)

Applicant respectfully notes at the outset that in order to establish a *prima facie* case of obviousness, it is the burden of the Examiner to demonstrate that three criteria are met: first, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; second, there must be a reasonable expectation of success; and third, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See M.P.E.P. § 2143.*

With particular reference now to the rejections, the Examiner has rejected claims 1-8 under 35 U.S.C. § 103 as being unpatentable over U.S. 6,812,803 to *Goergen* (“*Goergen*”). For at least the reasons outlined below however, Applicant respectfully disagrees with the contentions of the Examiner and submits that the rejection of claims 1-8 should be withdrawn.

With respect, apparently, to claim 1, the Examiner has asserted, among other things, that “*Goergen* teaches a laminated core having plated copper on both of its sides one with side being a ground plane (Cf. Col 18). Two power cores are prepared (Cf Col 19) and are laminated. Each power core is plated. A backplane panel is formed by stacking and aligning the copper-plated cores. (Cf, Col 20) After a material stack is cooled, through holes are drilled in the backplane and the entire assemble is plated with copper.” The Examiner then concludes that “the skill in this art is such that it would have been within the ordinary skill of an artisan to drill said hole and/or plate high transmission lines” (emphasis added).

Applicant understands from the foregoing that the Examiner has conceded that *Goergen* fails to teach “plating the single conductive path” as recited in claim 1. However, while the Examiner has alleged that “it would have been within the ordinary skill of an artisan to . . . plate high transmission lines,” the Examiner has completely failed to establish, or even assert, the existence of any suggestion or motivation to undertake such a modification of the *Goergen* device. In this regard, Applicant submits that the Examiner cannot establish a *prima facie* case of obviousness simply by asserting that an artisan possesses the requisite skill to perform a particular modification. Rather, establishment of a *prima facie* case of obviousness requires, among other things, that there be a suggestion or motivation to modify the reference teachings. Not only has the Examiner failed to establish the existence of any such suggestion or motivation, but it is not at all clear that plating the “high speed differential pairs” recited in *Goergen* (see col. 18, lines 40-59) would produce a discernible benefit in any event. Finally, the Examiner has not established that such a modification could be undertaken without impairing the integrity and functionality of the *Goergen* device.

The Examiner has further asserted, with regard to the rejection of claims 1-8, that “It is old in the art to use a plating bar (Cf. Claim 1) to plate a conductive path is provided”. Inasmuch as the Examiner has not established that the claimed use of a plating bar is disclosed in the cited reference, it appears that the Examiner is relying, at least in part, upon personal knowledge as a basis for rejecting claims 1-8. Particularly, the Examiner has not identified any references or other materials as being obvious to combine with the teachings of *Goergen*. In view of the foregoing, and pursuant to 37 C.F.R. 1.104(d)(2), Applicant hereby respectfully requests an Examiner affidavit that: (i) specifically identifies any and all reference(s),

other than those that have been specifically cited by the Examiner, upon which the obviousness rejection of claims 1-8 is based; and (ii) provides complete details concerning the reasoning and analysis of the Examiner concerning those references as those references are purported to apply to the rejection of claims 1-8.

With continuing reference to the rejection of claims 1-8, Applicant notes that claim 1 requires, among other things, “routing the outer edge of the printed circuit board to electrically isolate each at least one conductive path.” However, the Examiner has failed to establish, or even assert, that this limitation, in combination with the other limitations of claim 1, is taught or suggested by *Goergen*.

As the foregoing makes clear, the Examiner has failed to establish a *prima facie* case of obviousness with respect to claims 1-8, at least because the Examiner has failed to establish a suggestion or motivation to modify the purported reference teachings, and because the Examiner has not established that the cited reference, even if modified in the manner advanced by the Examiner, teaches or suggests all of the claim limitations. Applicant thus respectfully submits that the rejection of claims 1-8 should be withdrawn.

III. Allowable Subject Matter

Applicant acknowledges with thanks the indication of the Examiner that claims 9-14 are allowed, and Applicant also wishes to thank the Examiner for the careful review of those claims.

IV. Examination of Pending Claims 15-20

A review of the Office Action indicates that the Examiner has not addressed pending claims 15-20. Accordingly, Applicant has submitted herewith a ‘Request to Re-Start Time Period for Reply’ for consideration by the Examiner. *See MPEP § 710.06.*

V. New Claims 21-27

By this paper, Applicant has added new claims 21-27. Support for these new claims can be found, for example, in Figure 4, and at paragraphs [029] - [033] of the specification.

VI. Amendments to the Specification

By this paper, Applicant has amended paragraphs [029] – [031] of the specification in order to correct inconsistencies with respect to part numbering in Figure 4. No new matter is believed to be entered by these amendments to the specification.

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CONCLUSION

In view of the remarks and amendment submitted herein, Applicant respectfully submits that each of the pending claims 1-27 is now in condition for allowance. Therefore, reconsideration of the rejections is requested and allowance of those claims is respectfully solicited. In the event that the Examiner finds any remaining impediment to a prompt allowance of this application that could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate the same with the undersigned attorney.

Dated this 23rd day of August, 2005.

Respectfully submitted,



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AMENDMENTS TO THE FIGURES

The attached Replacement Sheet of drawings includes changes to Figure 4. This sheet replaces the original sheet including Figure 4.

Attachments: Replacement Sheet for Figure 4
Redline Sheet Showing Changes



Title: SYSTEMS AND METHODS FOR FABRICATING PRINTED CIRCUIT BOARDS
Inventor: Stephen Nelson and Donald White
Docket No.: 15436.259.1

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REDLINE MARKUP
SHOWING CHANGES

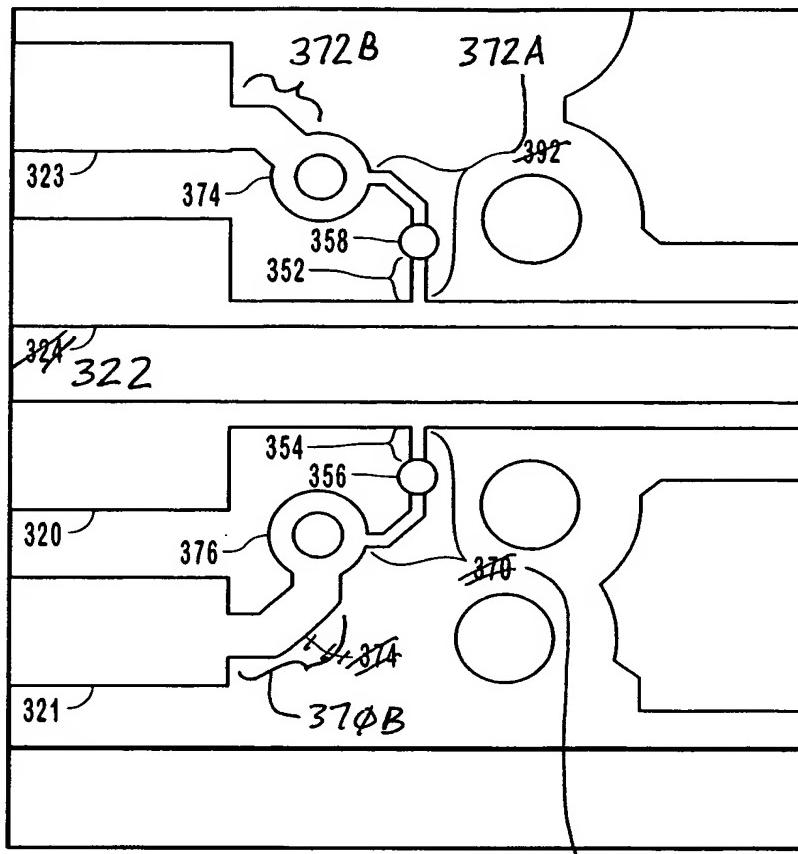


Fig. 4

370A